

BIOMIMETICS

ADITI, december 31, 2017

MEGALOPTA BEE

CARMEN CRUZ

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WHAT IS BIOMIMETICS?

bio (life) mimesis (imitate)

Biomimetic refers to human-made processes, substances, devices, or systems that imitate nature.

The art and science of designing and building biomimetic apparatus is also known as biomimicry because they mimic biological systems. The field is of special interest to researchers in nanotechnology, robotics, artificial intelligence and the medical industry.

WHY IMITATING NATURE'S BEST TRICKS IS THE FUTURE OF ENGINEERING.

BY JAKE SCOBNEY-THAL DECEMBER 1, 2014, 4:50 P.M.

SOME INFORMATION ABOUT BIOMIMETICS

It is the science that studies and imitates the characteristics of living things, applying specific knowledge to improve what exists or to invent new products.

some examples on biomimetics:



Japan's 500 Series Shinkansen bullet train

<https://www.bloomberg.com/news/articles/2008-02-11/usin-g-nature-as-a-design-guidebusinessweek-business-news-stock-market-and-financial-advice>

EYES OF THE MEGALOPTA BEE...

Megalopta bee can perceive fleeting movements in a range of almost 360 degrees. The eyes perceive the images as if they were a pixelated mosaic, but they can detect a wider range of colors, the polarization of light, and send almost instantaneous signals to their nervous systems thanks to their photoreceptors.



USGS Bee Inventory and Monitoring Lab from Beltsville,
Maryland, USA - - *Megalopta genalis*, M, back, panama,
barocolorado_2014-09-19-16.42.09 ZS PMax, 17 November
2014

...FOR NIGHT VISION SYSTEMS



AUDI

2 NOV, 2011

<https://www.16valvulas.com.ar/category/audi/page/18/>

Some nocturnal insects have developed their vision until they can see in the dark and adapt to different degrees of brightness and color. Several vehicle manufacturers have inspired in the megalopta bee and who have created intelligent algorithms to aid night driving. Like insects, the algorithm can detect and process sudden light signals in minute times, and adapt the image of the camera that we have installed.

WEBGRAPHY

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